



**6712-01**

**FEDERAL COMMUNICATIONS COMMISSION**

**47 CFR Parts 90**

**[WP Docket No. 07-100; FCC 20-137; FRS 17147]**

**4.9 GHz Band**

**AGENCY:** Federal Communications Commission.

**ACTION:** Proposed Rule.

**SUMMARY:** In this Seventh Further Notice of Proposed Rulemaking (FNPRM), the Federal Communications Commission (Commission) proposes rules for a new state-based licensing regime for public safety operations in the 4.9 GHz band, which would complement the new leasing regime adopted in the Sixth Report and Order. The Seventh FNPRM proposes to make permanent the current freeze on new applications and grandfather all current public safety licensees. It also proposes to allow states without a statewide license to obtain such a license and seeks comment on the creation of a voluntary state band manager to coordinate operations in the band. Lastly, it seeks comment on additional ways to implement and facilitate robust use of the band, including steps to address expanded access in states that divert 911 fees, the use of dynamic spectrum sharing, and ways to encourage collaboration across jurisdictions.

**DATES:** Interested parties may filed comments on or before [INSERT 30 days after publication in the FR]; and reply comments on or before [INSERT 60 days after publication in the FR].

**ADDRESSES:** You may submit comments, identified by WP Docket No. 07-100, by any of the following methods:

- **Electronic Filers:** Comments may be filed electronically using the internet by accessing the ECFS: <http://www.fcc.gov/ecfs/>.

- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street SW, Washington, DC 20554.
- Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID-19.

See FCC Announces Closure of FCC Headquarters Open Window and Change in Hand-Delivery Policy, Public Notice, DA 20-304 (March 19, 2020), <https://www.fcc.gov/document/fcc-closes-headquarters-open-window-and-changes-hand-delivery-policy>.

People with Disabilities. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer and Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

**FOR FURTHER INFORMATION CONTACT:** Jonathan Markman of the Wireless Telecommunications Bureau, Mobility Division, at (202) 418-7090 or

Jonathan.Markman@fcc.gov Thomas Eng of the Public Safety and Homeland Security Bureau at 202-418-0019 or Thomas.Eng@fcc.gov.

**SUPPLEMENTARY INFORMATION:** This is a summary of the Commission's Seventh Further Notice of Proposed Rulemaking in WP Docket No. 07-100, FCC 20-137 adopted September 30, 2020 and released October 02, 2020. The full text of the Seventh Further Notice of Proposed Rulemaking, including all Appendices, is available for inspection and copying during normal business hours in the FCC Reference Center, 445 12<sup>th</sup> Street SW, Room CY-A257, Washington, DC 20554, or by downloading the text from the Commission's website at <https://www.fcc.gov/document/fcc-expands-access-and-investment-49-ghz-band-0>. Alternative formats are available for people with disabilities (Braille, large print, electronic files, audio format), by sending an e-mail to FCC504@fcc.gov or calling the Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY).

### **Ex Parte Rules**

This proceeding shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's ex parte rules. Persons making ex parte presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral ex parte presentations are reminded that memoranda summarizing the presentation must: (1) List all persons attending or otherwise participating in the meeting at which the ex parte presentation was made; and (2) summarize all data presented and arguments made during the presentation.

If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda, or other filings in the

proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during ex parte meetings are deemed to be written ex parte presentations and must be filed consistent with section 1.1206(b) of the Commission's rules. In proceedings governed by section 1.49(f) of the rules or for which the Commission has made available a method of electronic filing, written ex parte presentations and memoranda summarizing oral ex parte presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's ex parte rules.

## **Synopsis**

1. In this Seventh Further Notice of Proposed Rulemaking, we propose to license the 4.9 GHz band at the state level going forward, while grandfathering 4.9 GHz licenses that were in effect at the time of the Freeze Public Notice and those granted pursuant to a waiver of, or modification of, the freeze. We seek comment on enabling state governments to manage voluntarily 4.9 GHz operations and coordination within their states, so that each state can determine the appropriate use of the band given its unique situation. We anticipate that transitioning to a voluntary state band manager model would allow state governments to coordinate new public safety deployments in the band, alongside non-public safety operations deployed through lease arrangements, through the state entity selected to be the State Lessor. We also seek comment on actions that we can take to further encourage robust use of the 4.9 GHz band and to implement the new leasing framework adopted in the accompanying Sixth

Report and Order.

**A. Revised 4.9 GHz Licensing and Grandfathering Incumbent Licenses**

2. State-Based Licensing. Under the Freeze Public Notice, the Bureaus will not accept 4.9 GHz applications or issue new or modified licenses absent grant of a waiver. In anticipation of a proposed transition to state-based management of 4.9 GHz public safety operations going forward, we propose to amend our 4.9 GHz licensing rules to limit future licensing to state entities seeking a statewide license in states without an existing statewide licensee. Under this approach, the Commission would not accept new or modified applications for a license authorizing operations of any kind (geographic area or permanent fixed site operations) in the 4.9 GHz band below the state level. License applications would only be accepted and processed if they are filed by a state governmental entity for a statewide license in a state with no statewide licensee, or if they meet other limited exceptions. We seek comment on this approach, which we anticipate will maximize opportunities for states to voluntarily facilitate more efficient 4.9 GHz band operations.

3. Grandfathering Incumbent Licenses. We seek to ensure continued access for important incumbent 4.9 GHz band public safety operations under any revised 4.9 GHz band licensing structure. We therefore propose to grandfather licensees authorized as of the date of the Freeze Public Notice and any 4.9 GHz licensees granted an authorization pursuant to a waiver of, or modification of, the freeze. We seek comment on whether this is the appropriate scope of any grandfathering. Specifically, we propose that grandfathered geographic area licensees would be able to obtain renewal of existing licenses. They would also be permitted to add base stations, mobile units, and temporary fixed sites within their authorized license area, up to the limits of their jurisdiction—all of which they can do under our rules without Commission

approval. Incumbent fixed point-to-point and fixed point-to-multipoint system licensees would also be permitted to obtain renewal and continue operations under existing technical parameters, but would not be permitted to modify their licenses in any way to increase their spectral or geographic coverage or obtain a license for a new fixed system. We seek comment on this approach and on potential alternatives. If we grandfather licenses as proposed, should we apply this treatment to all incumbent 4.9 GHz band operations or only to some specific class of licenses? Should nongovernmental operations receive the same protections as those of public safety agencies? If we grandfather fixed site licenses, should we also grandfather the “primary” status certain fixed links enjoy under section 90.1207(d) of our rules? How would removing primary status affect current and future public safety operations in the 4.9 GHz band? If we grandfather these licenses as proposed, to what extent should licensees be permitted to modify those licenses as their deployment needs change? Commenters should describe the costs and benefits of any approach they support.

#### **B. State Management of 4.9 GHz Operations**

4. In the accompanying Sixth Report and Order, we adopt a leasing framework in which state governments, acting through a single state entity holding a statewide 4.9 GHz band license (the State Lessor) will have the authority to lease 4.9 GHz band access to public safety and to non-public safety entities. The State Lessor also will be authorized to engage in non-public safety use of the band on behalf of the state government and, upon issuance of the Bureaus’ freeze modification public notice, will be permitted to add permanent fixed sites to its network. In this Seventh Further Notice of Proposed Rulemaking, we seek comment on enabling state governments to exercise similar centralized control over 4.9 GHz band public safety operations in their jurisdictions. Under this voluntary model, a state government would have the

option to oversee all 4.9 GHz band operations in the state: non-public safety and/or public safety operations through its role as State Lessor, and public safety operations through its role as a State Band Manager.

# **1. State Band Manager Model**

5. Commission Use of Band Manager Model. In 2000, the Commission created a new class of licensee known as “guard band managers” in the 700 MHz band. A guard band manager was defined as a “commercial licensee . . . that functions solely as a spectrum broker by subdividing its licensed spectrum and making it available to system operators or directly to end users for fixed or mobile communications consistent with Commission Rules.” In establishing this “new class of commercial licensee . . . engaged in the business of leasing spectrum for value to third parties on a for-profit basis,” the Commission issued authorizations to licensees for the purpose of overseeing and coordinating, through private contractual lease agreements, the operations of third parties, rather than for their own use. The Guard Band Manager was responsible for coordinating the use of frequencies among its customers to minimize interference and for resolving interference conflicts among its customers and, in the first instance, among its customers and neighboring users of spectrum licensed to other Guard Band Managers or other licensees. The Commission found that Guard Band Manager licensing represented an “innovative spectrum management approach that should enable parties to more readily acquire spectrum for varied uses, while streamlining the Commission's spectrum management responsibilities.” The Commission further expected Guard Band Managers not to engage in unjust or unreasonable discrimination among spectrum users and to honor all reasonable requests by potential users for access to the licensed spectrum, while recognizing that a Guard Band Manager may have valid business reasons for denying a potential user's request for spectrum.

6. Notwithstanding that the Commission ultimately moved away from relying on Guard Band Managers in the 700 MHz band, this model points to the Commission's authority to rely on band managers to provide and manage spectrum access where appropriate and with necessary restrictions in place. Further, we believe that the band manager concept can inform our approach to future access and coordination of operations in the 4.9 GHz band given its specific characteristics, including shared spectrum use by public safety licensees with overlapping jurisdictions and extensive licensee coordination of operations (rather than extensive Commission regulation of technical parameters) to prevent harmful interference. Additionally, unlike 700 MHz Guard Band Managers, a state that takes on a band manager role would likely already be part of the 4.9 GHz ecosystem, increasing the opportunities for efficiencies and fostering an environment that brings order to overcome the current challenges of the 4.9 GHz coordination landscape. We seek comment on this assumption.

7. 4.9 GHz State Band Manager. Under this approach, a state entity would have the opportunity to oversee and coordinate use of the 4.9 GHz band by public safety entities. Specifically, we seek comment on allowing each state to select voluntarily a statewide entity, whether the State Lessor or another statewide licensee, as State Band Manager with authority to manage access to, and public safety operations within, the 4.9 GHz band. A public safety entity seeking new access to the 4.9 GHz band or a licensee seeking to expand operations beyond its grandfathered license parameters would be authorized to operate (if agreed to) under a State Band Manager's license, tantamount to a "customer" of a Guard Band Manager in the former 700 MHz paradigm. A State Band Manager also would coordinate operations to prevent harmful interference amongst and between public safety and non-public safety entities. We seek comment on this approach, including its potential costs and benefits.



8. We expect that empowering each state to choose to transition to a State Band Manager model would streamline and facilitate more efficient spectrum use by consolidating oversight with the state government. We seek comment on this assumption. A State Band Manager model could replace the existing informal coordination model that is the basis for shared use of the 4.9 GHz band, while also avoiding the need for substantial regulatory oversight of licensee technical parameters. Under this model, public safety entities (and nongovernmental organizations operating in support of public safety) that seek to deploy in the 4.9 GHz band would work with a State Band Manager to coordinate and plan this deployment based on the policies and procedures it determines are best for its situation, rather than based on individual licensing and interference resolution rules issued by the Commission. We seek comment on this overall approach, including the associated costs and benefits.

9. Rights and Responsibilities of a State Band Manager. We anticipate that a State Band Manager would, at a minimum, coordinate operations among grandfathered public safety licensees and 4.9 GHz lessees. Accordingly, we seek comment on whether we should require a State Band Manager to also be a State Lessor. What are the costs and benefits of adopting such an approach? We also seek comment on what additional responsibilities and rights should be assigned to a State Band Manager. For example, as prospective 4.9 GHz public safety users would be authorized to operate through a State Band Manager's license, what flexibility should we provide regarding its consideration of requests for spectrum access for new or modified public safety operations in the band? Should we adopt the approach applicable to 700 MHz Guard Band Managers that created an expectation that all reasonable requests by potential users for access to the licensed spectrum would be honored, while recognizing that there may be valid reasons for denying a potential user's request for spectrum? Should we establish other criteria or

guidelines for a State Band Manager to use in determining whether to grant requests for expanded or new public safety operations—e.g., from counties or municipalities within the state? Should a State Band Manager have authority to deny public safety access or prioritize some operations (such as non-public safety operations conducted pursuant to a lease) over others? How much discretion should it have in making these determinations? Should we impose requirements on a State Band Manager to treat its own operations as it would those of other entities under its jurisdiction? What should be the limits of a State Band Manager's authority to grant public safety access to nongovernmental organizations operating in support of public safety?

10. Commission Oversight. We also seek comment on the role the Commission should play in overseeing a State Band Manager's decisions. Should we adopt the 700 MHz Guard Band Manager approach and rely on a State Band Manager to be primarily responsible for resolving interference disputes, at least in the first instance, thereby minimizing Commission involvement? Alternatively, should that authority remain solely with the Commission? To what extent should the Commission impose rules governing the coordination among different operations, either formal or informal, other than through a State Band Manager and a State Lessor? In addition, to what extent should the Commission assess the success of the voluntary leasing framework adopted in the Sixth Report and Order? Should we monitor leasing activities or take further steps to facilitate widespread leasing and, if so, in what form and to what extent?

11. Implementation of a State Band Manager Model. We seek comment on the extent to which states are equipped to take on this management and coordination role. Do states have an entity already capable of undertaking this role, or will further expertise be required? Are there legal issues involved in granting a state entity this authority over other state and local

entities, such as applicable state laws? We believe that a State Band Manager should be a state entity and a 4.9 GHz band licensee, but we seek comment on the extent to which we should combine the role of State Band Manager with that of a State Lessor. Should we grant states the authority to determine if they should be the same or separate entities? Or should this be a Commission determination? How should a state select its State Band Manager if that entity will be different from a State Lessor? In the accompanying Sixth Report and Order, we established a process for an existing statewide licensee to select a different entity to be the State Lessor and for the Commission to authorize that assignment. We seek comment on whether to apply the same or a similar process to allow for states to select a different entity to be a State Band Manager. We also seek comment on various potential approaches to incentivizing state participation in a State Band Manager construct. Specifically, should we establish a voluntary construct for state government participation, or should we require that any State Lessor benefiting from our flexible leasing approach also become a State Band Manager? Should we require a state with statewide 4.9 GHz licensee(s) to select a State Band Manager? In the alternative, in lieu of a State Band Manager model, should we instead rely solely on a State Lessor entering into secondary markets transactions to accommodate the needs of existing and future 4.9 GHz public safety users? We request that commenters be specific in providing the associated costs and benefits of each of these potential approaches. How can the Commission work with equipment manufacturers, licensees, and lessees to incentivize equipment development and reduce the cost of deploying in this band for both public safety and non-public safety entities? How could State Band Managers work most effectively with those entities? Are there any additional measures the Commission should take to promote greater use of the band in support of public safety services?

12. New Individual Deployment Licensing. We seek comment on the future of fixed

site licensing in the 4.9 GHz band under a potential State Band Manager framework. The state government, through a State Band Manager and/or a State Lessor, would be in a position to coordinate the needs of lessees and public safety entities to build sites, whether base stations servicing mobile devices or fixed sites for point-to-point or point-to-multipoint systems. This approach potentially eliminates the need for the Commission to license permanent fixed sites individually. We recognize the continuing need for the Commission to exercise its authority and require individual licensing of certain facilities, even under a State Band Manager model (e.g., coordination required by international agreement, environmental assessment required, or where a station impacts a quiet zone). We seek comment on the impact of a State Band Manager model and on the scope of appropriate rules for any continued Commission licensing of 4.9 GHz band fixed site deployments. We also seek comment on whether to continue to afford “primary” status to certain fixed links under a State Band Manager model. Would there be a need to continue to grant such status to some sites under a State Band Manager model? Should it be solely within a State Band Managers’ discretion as to whether and how to prioritize the status of fixed sites within its jurisdiction?

13. We also seek comment on the interplay of a State Band Manager framework and grandfathering the 4.9 GHz licenses that are in effect at the time of the Freeze Public Notice or that are granted through waiver of, or modification of, the freeze. For example, is there any need to grandfather other statewide licenses if a statewide entity will be acting as a State Band Manager? How should our rules define that status if we adopt a State Band Manager approach? We anticipate that allowing a State Band Manager to determine the status of all fixed links in its jurisdiction without Commission involvement may be the most efficient way to maximize flexibility in determining the best use of the band in its jurisdiction. We seek comment on this

approach, including the associated costs and benefits.

## **2. Maximizing Efficiencies to Coordinate 4.9 GHz Operations**

14. 4.9 GHz Licensing Data. In the Sixth FNPRM, the Commission sought comment on a proposal to expand the 4.9 GHz deployment data in the Universal Licensing System to include locations and other technical parameters of base stations deployed through geographic area licenses. Although we did not adopt this proposal in the accompanying Sixth Report and Order, we seek further comment on the need to more comprehensively reflect 4.9 GHz band deployments beyond fixed sites given our new leasing framework and our proposed State Band Manager framework. To what extent should the Commission have a continued role in maintaining data on deployments, as opposed to State Band Managers? To the extent we delegate such data management duties to the State Band Managers, should we require the more expansive data collection and maintenance that the Commission was considering? If the Commission should continue to have a role, what should that role be, and what is the most efficient method to effectuate it?

15. Sharing Arrangements for Public Safety. Under our current rules, 4.9 GHz licensees are permitted to enter into sharing arrangements for the use of spectrum with entities that do not meet the eligibility requirements for a license. Entities sharing with a 4.9 GHz licensee, however, must use the spectrum in support of public safety services. We seek comment on whether to eliminate the current rules providing for such sharing, given our adoption of rules providing for increased flexibility in leasing and the proposed adoption of a State Band Manager construct. For example, a nongovernmental entity seeking to deploy in the 4.9 GHz band, either in support of public safety or for its own operational needs, is now permitted to enter into a leasing arrangement with a State Lessor. In the alternative, should we permit a non-public safety

entity seeking to support public safety to simply work with a State Band Manager to obtain the necessary access, or to enter into a sharing agreement with another 4.9 GHz band licensee? If a State Band Manager model were not adopted, what is the appropriate method for accommodating this sharing in a revised, and substantially more limited, licensing environment (aside from leasing)?

16. We also seek comment on eliminating our similar current rule allowing operation outside a licensee's jurisdiction with the permission of that jurisdiction. We expect that such operations would be conducted instead under the authority of a State Band Manager in the event we adopt such an approach. What are the specific costs and benefits of no longer permitting by rule these types of operations?

17. Interference Protection and Resolution. The existing structure of informal coordination in the 4.9 GHz band relies on licensees cooperating amongst themselves to resolve any interference concerns that may arise from their operations. As use of the band increases through leasing activity and as a variety of potentially disparate technologies and network architectures are introduced into a shared band, will coordination be possible in the absence of more clearly-defined technical rules and interference resolution procedures? Or will a State Band Manager structure be sufficient to prevent or resolve any instances of harmful interference?

18. We seek comment on whether any additional steps are necessary to reduce the likelihood of harmful interference between shared users of the 4.9 GHz band, particularly where we anticipate new and different types of deployments generated by a robust secondary market. Should we adopt additional rules standardizing different types of operations to avoid harmful interference? If so, what type of rules would be appropriate? Should we leave standardization to a State Band Manager or impose some requirements by rule? To what extent should the

Commission facilitate interference resolution between lessees and public safety operations, as opposed to leaving these decisions to the state governmental entities charged with coordinating the band? If there is no State Band Manager, what should the resolution process be? We also encourage licensees and lessees to work together to develop best practices for preventing harmful interference and seek comment on how the Commission can encourage these efforts.

19. Absence of a State Band Manager/State Lessor. We also seek comment on how to structure our rules for states without a State Band Manager under this framework, either because we determine that states should have the right to decline this role or because there is no statewide licensee eligible for it. In the event a state without a State Band Manager has a State Lessor, public safety entities seeking to gain access to the 4.9 GHz band will be able to do so through leasing arrangements with the State Lessor. We seek comment on whether there are any other implications for public safety access to the 4.9 GHz band in that scenario, and whether there are additional changes we should make to our rules to accommodate public safety use in that event. Also, we recognize that currently there are a few states/territories with no existing 4.9 GHz statewide licensee, and we seek comment on how to provide for future public safety use beyond grandfathered operations if this remains unchanged. How should local or nongovernmental entities, or state entities not seeking status as a State Lessor or State Band Manager, obtain 4.9 GHz band access in the absence of a statewide licensee that has voluntarily assumed either of those roles? How can we best encourage states without a statewide license to obtain one, either for purposes of public safety use and/or to facilitate leasing to commercial entities, critical infrastructure or other users? Are there barriers to such licensing, either logistical or in state law?

**C. Supporting and Encouraging Greater 4.9 GHz Band Usage**

20. Encouraging Collaboration Across Jurisdictions. In the Sixth FNPRM, the Commission sought comment on ways to increase the flexibility of regional planning committees in facilitating use of the 4.9 GHz band. Although we decline to adopt any specific changes related to regional planning committees in the accompanying Sixth Report and Order, we seek comment more broadly on whether and how to encourage cross-jurisdictional cooperation, whether directly among State Lessors of different states or through regional planning committees. Are there ways State Lessors (or State Band Managers) could leverage regional planning committees to standardize spectrum availability over larger geographic areas to facilitate spectrum access through secondary markets? Should we modify section 90.1211 of our rules to provide for a different role for regional planning committees in this process? How would this cross-jurisdictional cooperation interact with a State Band Manager framework?

21. States that Divert 911 Fees. In the Sixth Report and Order, we create leasing opportunities for the vast majority of states, contingent upon their having not been identified in the Commission's December 2019 911 Fee Report as a state that diverts 911 fees for non-911 purposes. We now seek comment on how to address 911-fee-diverting states. Should we require such states to stop diversion before they are permitted to benefit from the leasing framework, including the ability to create a State Lessor, or extend the leasing framework to such states? Would extending the framework to such states increase innovation and enable access to rural WISPs, electric utilities, and 5G wireless operators that may be able to put this too-fallow spectrum to use? Or would such an extension inappropriately reward states that continue to hurt public safety by diverting 911 fees to non-911 purposes? Should we limit our proposal in this Seventh FNPRM to allow states to create a State Band Manager only to states that do not divert



911 fees? Should we create an exception for states seeking to establish a State Lessor solely for the purpose of leasing to public safety entities? How would these approaches impact future public safety, commercial, and critical infrastructure access to spectrum in the band and operations? We seek comment on the costs and benefits of adopting any of the above approaches to addressing this important public safety issue.

22. We also seek comment on how to address states that start or stop diverting 911 fees. First, we recognize in the Sixth Report and Order that states may stop diverting 911 fees and allow them to petition the Commission to access the 4.9 GHz leasing framework based on documented proof of such a change. Should we continue that process going forward, or should we automatically allow a state that is no longer identified as a fee diverter in a future report to start leasing? To access the leasing framework, is it sufficient for a state to show that it has stopped diverting 911 fees, or must it replenish the diverted funds as well (specifically those that triggered the designation as a fee-diverting state)? Second, how should we treat states that are identified as diverters in a subsequent Commission annual 911 fee report to Congress? Should we prohibit such states from signing new leases until they establish they no longer divert 911 fees? Should we require them to cease diverting 911 fees within some period of time or else face termination of their leasing rights? If so, how long should they have to correct the error? Three months? One year? Three years? In the event a state begins diverting 911 fees, how do we ensure that any lessees are held harmless and can continue to access the spectrum they have leased? Does the Commission have authority to prohibit a lessee from making any payments to use the spectrum during a period in which a state is identified as a fee diverter? Third, should there be a new mechanism for states to challenge the Commission's inclusion of a state a fee-diverter in annual fee reports, or is the ability to petition the Commission envisioned by today's

Sixth Report and Order sufficient for these purposes?

23. Finally, should we create alternative means of accessing unused spectrum in the 4.9 GHz band for serial diverters? Specifically, if the Commission's annual 911 fee report identifies a state as a diverter for three years in a row, should the Commission itself establish a band manager to oversee operations in the states? If so, should we do so through a request for proposal process? Or should we conduct an overlay auction in such states to allow a commercial operator full access to the 50-megahertz band (while protecting incumbent public safety uses)? In short, how can the Commission maximize use of 4.9 GHz band spectrum while further discouraging 911 fee diversion?

24. Dynamic Spectrum Sharing. We seek comment on whether a dynamic spectrum access system in the 4.9 GHz band would make it easier for a State Lessor to implement the spectrum leasing structure adopted in the accompanying Sixth Report and Order. If so, which type of spectrum access systems would be most useful in this band? Would a State Lessor be more likely to engage in spectrum leasing if it could rely on dynamic spectrum sharing to ensure continued spectrum availability to suit the needs of public safety entities? How would such dynamic spectrum sharing arrangements work within a State Band Manager framework? As sharing between public safety and non-public safety operations increases, are there particular public safety operations that require protection above and beyond those currently found in the Commission's rules?

25. The Commission has adopted rules facilitating dynamic spectrum access in several spectrum bands, including the TV white spaces, the Citizens Broadband Radio Service, and the 6 GHz band. In those bands, the Commission enabled a range of different dynamic spectrum access solutions that could be implemented in the 4.9 GHz band. Could any of these

different models help facilitate coordination of leasing and future public safety operations in this band? Commenters should discuss the costs and benefits of any proposed sharing regime, as well as the logistics of its implementation. What other rule changes or Commission actions would be required to foster dynamic spectrum access? If the Commission were to implement such a system, should it be mandatory or voluntary? How should it differ from existing dynamic spectrum access systems?

26. Aeronautical Mobile Operations. In both the Fifth FNPRM and Sixth FNPRM, the Commission sought comment on whether to authorize aeronautical mobile operations in the 4.9 GHz band, which are currently prohibited by our rules. The Commission, however, has granted numerous waivers of the section 90.1205(c) prohibition on aeronautical use. Although we decline in the accompanying Sixth Report and Order to adopt any changes related to the band plan with respect to aeronautical mobile operations, we seek comment today on whether we should amend our rules to permit these operations given our new leasing framework.

Commenters generally support our proposals related to aeronautical mobile operations, and we seek comment on the interplay of these operations and our new leasing framework, as well as a State Band Manager framework. If we permit aeronautical mobile operations in the band, should we permit transmissions by unmanned aerial systems or only manned aircraft? What are the costs and benefits of permitting aeronautical mobile operations in the 4.9 GHz band? Would such operations be likely to increase the potential for harmful interference to public safety operations, or to new non-public safety operations deployed in the band through leasing? Should the Commission make these decisions by rule or allow State Band Managers the flexibility to make these decisions?

## **II. PROCEDURAL MATTERS**

27. Regulatory Flexibility Act. —The Regulatory Flexibility Act of 1980, as amended

(RFA) requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that “the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.”

28. The Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) concerning the potential impact of rule and policy change proposals in the Seventh FNPRM on small entities. The IRFA is set forth in Appendix E.

29. Paperwork Reduction Act.— The Seventh Further Notice of Proposed Rulemaking may result in new or revised information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. § 3506(c)(4), the Commission seeks specific comment on how it might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

### **III. INITIAL REGULATORY FLEXIBILITY ANALYSIS**

30. As required by the Regulatory Flexibility Act (RFA) of 1980, as amended, the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the Seventh Further Notice of Proposed Rulemaking (Seventh FNPRM). Written public comments are requested on this IRFA. As required by the Regulatory Flexibility Act (RFA) of 1980, as amended, the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small

entities by the policies and rules proposed in the Seventh Further Notice of Proposed Rulemaking (Seventh FNPRM). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments as specified in the Seventh FNPRM. The Commission will send a copy of the Seventh FNPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the Seventh FNPRM and IRFA (or summaries thereof) will be published in the Federal Register.

**A. Need for, and Objectives of, the Proposed Rules**

31. In the Seventh FNPRM, we propose to modify the licensing regime for the 4.9 GHz band to adopt licensing at the state level going forward to allow only state entities in states without a statewide licensee in the 4.9 GHz band to receive a new license. States with an existing statewide licensee will not see any new licensing, and local entities will not be permitted to obtain licenses. We seek comment on this proposal. We also propose to grandfather existing public safety licenses as of the date of the Freeze Public Notice and licensees granted pursuant to a waiver of, or modification of, the freeze, in order to protect incumbent public safety operations and will prohibit expansion of spectral rights by local entities other than through agreement with statewide licensees. We seek comment on the appropriate scope and application of grandfathering if we adopted this proposal.

32. In the Seventh FNPRM, we also seek comment on a new State Band Manager model for coordination of public safety entity access to the 4.9 GHz band similar to the band manager model the Commission adopted in the 700 MHz band. Under this framework, the state government will be responsible for coordinating all 4.9 GHz band operations, whether through leasing (through the State Lessor role) or by public safety (through the State Band Manager role)

in each state, as well as assisting in cross-jurisdictional cooperation to avoid harmful interference. This model will also ensure that each state determines the balance of public safety and non-public safety use that is best for its own situation. We seek comment on the role of the Commission in oversight of the decisions of the state government as part of its role as State Band Manager. We also seek comment on the extent to which states are equipped to take on such a management and coordination and the costs and benefits of this approach. Further, we seek comment on the future of individual site licensing under this model, and on the continued use of primary status for some sites in the band. In addition, we seek comment on the future of the band where no statewide licensee exists, or where the state chooses not to take on the role of State Band Manager or State Lessor. We also seek comment on whether and how we should permit access to the leasing framework for states that start or stop diverting 911 fees, including whether to have an exception for leasing solely to public safety entities, and if there should be a new mechanism for a state to challenge the Commission's designation of the state as a fee-diverter in annual fee reports.

33. Finally, we seek comment on the implementation of this approach and any changes which can facilitate the transition to this model. Given our new leasing framework and a State Band Manager framework on which we seek comment, we seek comment on a proposal raised in the Sixth FNPRM to expand the data included in our Universal Licensing System to more comprehensively reflect 4.9 GHz band deployments beyond fixed site licenses, to include locations and other technical parameters of base station deployed through geographic area licenses. We also seek comment on whether and how to encourage cross-jurisdictional cooperation, whether directly between State Lessors of different states or through regional planning committees and inquire whether to modify section 90.1211 of our rules to provide for a

different role for regional planning committees in this process. Within the scope dynamic spectrum sharing, we ask whether we should implement rules similar to those governing the use of dynamic spectrum access systems in other spectrum bands (i.e. Citizens Broadband Radio Service and 6 GHz band), in the 4.9 GHz band to make the spectrum leases we authorize in the Sixth Report and Order and a new State Band Manager model we propose in the Seventh FNPRM easier to implement. Further, with respect to aeronautical mobile operations, we seek comment on whether we should amend our rules to permit these operations, given our new leasing approach and a proposed State Band Manager framework.

## **B. Legal Basis**

34. The proposed action is authorized pursuant to Sections 1, 4(i), 4(j), 4(o), 301, 303(b), 303(g), 303(r), 316, 332, and 403 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154(i), 154(j), 154(o), 301, 303(b), 303(g), 303(r), 316, 332, and 403.

## **C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply**

35. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.

36. Small Businesses, Small Organizations, Small Governmental Jurisdictions. Our

actions, over time, may affect small *entities* that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein. First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the SBA's Office of Advocacy, in general a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States which translates to 30.7 million businesses.

37. Next, the type of small entity described as a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field." The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations. Nationwide, for tax year 2018, there were approximately 571,709 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.

38. Finally, the small entity described as a "small governmental jurisdiction" is defined generally as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand." U.S. Census Bureau data from the 2017 Census of Governments indicate that there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States. Of this number there were 36,931 general purpose governments (county, municipal and town or township) with populations of less than 50,000 and 12,040 special purpose governments - independent school districts with enrollment populations of less than 50,000. Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at



least 48,971 entities fall into the category of “small governmental jurisdictions.”

39. Private Land Mobile Radio Licensees. Private land mobile radio (PLMR) systems serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. Companies of all sizes operating in all U.S. business categories use these radios. Because of the vast array of PLMR users, the Commission has not developed a small business size standard specifically applicable to PLMR users. The closest applicable SBA category is Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications. The appropriate size standard for this category under SBA rules is that such a business is small if it has 1,500 or fewer employees. For this industry, U.S. Census Bureau data for 2012 shows that there were 967 firms that operated for the entire year. Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more. Thus under this category and the associated size standard, the Commission estimates that the majority of PLMR licensees are small entities.

40. According to the Commission’s records, a total of approximately 269,953 licenses comprise PLMR users. Of this number there are a total of 3,565 PLMR licenses in the 4.9 GHz band. The Commission does not require PLMR licensees to disclose information about number of employees, and does not have information that could be used to determine how many PLMR licensees constitute small entities under this definition. The Commission however believes that a substantial number of PLMR licensees may be small entities despite the lack of specific information.

41. Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. This industry comprises establishments primarily engaged in manufacturing

radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment. The SBA has established a size standard for this industry of 1,250 employees or less. U.S. Census Bureau data for 2012 show that 841 establishments operated in this industry in that year. Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees and 6 establishments operated with 2,500 or more employees. Based on this data, we conclude that a majority of manufacturers in this industry are small.

**D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

42. The proposals in the Seventh FNPRM may impose new or additional reporting or recordkeeping and/or other compliance obligations on small entities, if adopted. The Commission seeks comment on information collections related to the implementation of a State Band Manager model, and what entity that information should be submitted to. To the extent the Commission adopts a State Band Manager model similar to the Guard Band Manager model it adopted for the 700 MHz band, implementation of this model could include reporting by a State Band Manager on the policies and procedures (including recordkeeping and reporting requirements by small entities and other lessees in its jurisdiction) adopted to facilitate and manage shared use by non-public safety entities as well as annual reporting on information about the manner in which the spectrum is being utilized, including but not limited to the number and type of non-public safety entities operating in the band, the amount of spectrum being used by

non-public safety entities pursuant to lease agreements with unaffiliated third parties, and the length of the term of such lease agreements.

43. At this time, the Commission cannot quantify the cost of compliance for small entities if the proposals and other matters under consideration in the Seventh FNPRM are adopted, and is not in a position to determine whether small entities will be required to hire attorneys, engineers, consultants, or other professionals to meet any compliance obligations. We expect the information we receive in comments to help the Commission identify and evaluate relevant matters for small entities, including compliance costs and other burdens that may result from the proposals and matters raised in the Seventh FNPRM.

**E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

44. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for such small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”

45. The Commission’s reliance on policies and frameworks utilized in other spectrum bands as the basis of proposals and inquires in Seventh FNPRM potentially provides regulatory policies and frameworks that small entities are operationally familiar with and may therefore minimize any substantial economic impact if similar requirements are adopted in this

proceeding. To assist in the Commission's evaluation of the economic impact on small entities as a result of the actions that have been proposed in this proceeding, and the options and alternatives for such entities, the Commission has raised questions and sought comment on these matters in the Seventh FNPRM. As part of the inquiry, the Commission has specifically requested that commenters include costs and benefit analysis data in their comments. The Commission is hopeful that the comments it receives will specifically address matters impacting small entities and include data and analyses relating to these matters. Further, while the Commission believes the rules that are eventually adopted in this proceeding should benefit small entities, whether public safety or non-public safety, by giving them more options for gaining access to valuable wireless spectrum, the Commission expects to more fully consider the economic impact and alternatives for small entities following the review of comments filed in response to the Seventh FNPRM. The Commission's evaluation of such comments will shape the final conclusions it reaches, the final alternatives it considers, and the actions it ultimately takes in this proceeding to minimize any significant economic impact that may occur on small entities.

**F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules**

46. None.

**IV. ORDERING CLAUSES**

47. Accordingly, **IT IS ORDERED** that, pursuant to the authority found in sections 4(i), 302, 303(b), 303(f), 303(g), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 302a, 303(b), 303(f), 303(g), 303(r), and 405, this Seventh Further Notice of Proposed Rulemaking **IS HEREBY ADOPTED**.

48. **IT IS FURTHER ORDERED** that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, **SHALL SEND** a copy of this

Seventh Further Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

**List of Subjects in 47 CFR Part 90**

Communications equipment; Radio; Reporting and recordkeeping requirements

Federal Communications Commission.

Cecilia Sigmund,  
Federal Register Liaison Officer.

## **Proposed Rules**

### **PART 90 – PRIVATE LAND MOBILE RADIO SERVICES**

1. The authority citation for part 90 continues to read as follows:

AUTHORITY: 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7), 1401-1473

2. Revise § 90.1203 to read as follows:

#### **§ 90.1203 Licensing.**

(a) Except as provided in paragraphs (c) and (d) of this section, no new licenses will be issued for the 4940-4990 MHz band. Licenses issued prior to the effective date of these rules are subject to renewal but may not be modified in any way to increase a licensee's spectral or geographic coverage.

(b) Operations conducted pursuant to a license held by a State Lessor (as defined in § 90.1217), whether conducted by the State Lessor or its lessee(s), are not limited to operations in support of public safety. All other operations in this band are limited to those in support of public safety.

(c) Where there is no statewide license in a state, a state entity may apply for a license covering the entire state, provided it includes with Form 601 a letter, signed by the elected chief executive (Governor) for that state, or his or her designee, affirming that the entity is to act as the State Lessor for that state.

(d) The following applications may also be submitted by entities holding a license under this subpart:

- (1) applications to renew existing licenses without modification;
- (2) applications that seek to modify existing licenses by deleting frequencies or fixed sites;

(3) applications that seek to modify existing licenses by changing technical parameters in a manner that does not expand the station's spectral or geographic coverage, such as decreases in bandwidth, power level, or antenna height;

(4) applications to assign or transfer;

(5) notifications of construction for permanent fixed site licenses or consummation of assignments or transfers;

(6) requests for extensions of time to construct or consummate previously granted assignment or transfer applications;

(7) applications to cancel licenses;

(8) applications for special temporary authority for short-term operations; and

(9) applications from geographic area licensees that require individual licensing under § 90.1207(b).